



# COUNTY OF LOS ANGELES

## DEPARTMENT OF PUBLIC WORKS

*"To Enrich Lives Through Effective and Caring Service"*

DONALD L. WOLFE, Director

900 SOUTH FREMONT AVENUE  
ALHAMBRA, CALIFORNIA 91803-1331  
Telephone: (626) 458-5100  
[www.ladpw.org](http://www.ladpw.org)

ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1460  
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE

REFER TO FILE:

**PJ-2**

August 4, 2005

The Honorable Board of Supervisors  
County of Los Angeles  
383 Kenneth Hahn Hall of Administration  
500 West Temple Street  
Los Angeles, CA 90012

Dear Supervisors:

**LAC+USC MEDICAL CENTER REPLACEMENT PROJECT  
APPROVAL OF VARIOUS CONSTRUCTION CHANGE ORDERS  
CONTRACT PW-12641 MCCARTHY/CLARK/HUNT, A JOINT VENTURE  
FIRE RETARDANT, ADDITION OF WATERPROOF MEMBRANE, MOTORIZED  
COILING DOORS, Z-CLIP ATTACHMENTS, SMOKE DETECTORS, AND SEISMIC  
BRACING OF UTILITIES  
SPECS. 6550; C.P. 70787  
SUPERVISORIAL DISTRICT 1  
4 VOTES**

**JOINT RECOMMENDATION WITH THE CHIEF ADMINISTRATIVE OFFICER THAT  
YOUR BOARD:**

1. Approve and authorize the Director of Public Works to execute a change order for the change in the fire retardant materials in the Diagnostic and Treatment and Inpatient Tower buildings for a not-to-exceed amount of \$917,000.
2. Approve and authorize the Director of Public Works to execute a change order for the addition of a waterproof membrane under corrugated metal panels on the exterior of the Diagnostic and Treatment building for a not-to-exceed amount of \$162,221.

3. Approve and authorize the Director of Public Works to execute a change order for adding motors and associated systems to the overhead coiling doors in all buildings for a not-to-exceed amount of \$1,160,000.
4. Approve and authorize the Director of Public Works to execute a change order for the Z-clip connection detail for the Inpatient Tower building for a not-to-exceed amount of \$261,311.
5. Approve and authorize the Director of Public Works to execute a change order for additional smoke detectors in the Outpatient Department building for a not-to-exceed amount of \$360,000
6. Approve and authorize the Director of Public Works to execute a change order for upgrading the seismic bracing of utilities in the Central Plant for a not-to-exceed amount of \$1,350,000.

**REASON AND SCOPE - RECOMMENDATION 1**

Unforeseen condition	<input checked="" type="checkbox"/>	Regulatory agency requirement	<input type="checkbox"/>
Drawing Coordination	<input type="checkbox"/>	Previously approved scope change	<input type="checkbox"/>
Errors and Omissions	<input type="checkbox"/>		

Approving the recommended action will provide revised fire retardant material where the wall top track attaches to the underside of the concrete deck above. This condition occurs at the full-height interior walls in the Diagnostic and Treatment and the Inpatient buildings. The contract documents specified a manufacturer for the top-of-wall track system that no longer produces the product. Since the contract-specified fire retardant material is no longer available, revised top-of-wall details had to be submitted to the Office of Statewide Health Planning and Development (OSHPD) for approval. The replacement system is more expensive to purchase and install. Public Works and the Chief Administrative Office have reviewed this matter as well as the potential cost impact with the Project Advisory Committee. This work is considered to be within the scope of the project.

Public Works issued a proceed order in the amount of \$149,000 for a portion of this work to avoid delay impact, the value of which is included in the recommended \$917,000. Cost negotiation of this change with McCarthy/Clark/Hunt, a Joint Venture (MCH), has not been finalized. We estimate that the total cost will not exceed \$917,000 with no delay to the project completion date. However, if the final value of the change order exceeds the cost estimate, we will return to your Board for approval.

**REASON AND SCOPE - RECOMMENDATION 2**

Unforeseen condition	<input type="checkbox"/>	Regulatory agency requirement	<input type="checkbox"/>
Drawing Coordination	<input type="checkbox"/>	Previously approved scope change	<input type="checkbox"/>
Errors and Omissions	<input checked="" type="checkbox"/>		

Approving the recommended action will allow the addition of a waterproof membrane under corrugated metal panels, located at the north and south elevations of the building, ten utility shafts, and the south elevator shaft in the Diagnostic and Treatment building. During the review of the corrugated metal panel shop drawings, it was discovered that the contract drawings specified an inadequate moisture barrier that may trap water behind the panels. The change order provides a continuous waterproof membrane that will channel water out from under the metal panels. Public Works and the Chief Administrative Office have reviewed this matter as well as the potential cost impact with the Project Advisory Committee. This work is considered to be within the scope of the project.

The total cost of the work has been estimated at a not-to-exceed cost of \$162,221 with no delay to the project completion date. Public Works issued proceed orders to the contractor totaling \$144,000 to begin portions of this work and avoid construction delay. The proceed order amounts are included in the recommended \$162,221 change order.

**REASON AND SCOPE - RECOMMENDATION 3**

Unforeseen condition	<input type="checkbox"/>	Regulatory agency requirement	<input type="checkbox"/>
Drawing Coordination	<input type="checkbox"/>	Previously approved scope change	<input type="checkbox"/>
Errors and Omissions	<input checked="" type="checkbox"/>		

Coiling doors and shutters are provided at various locations in the hospital for security and fire protection. This change will provide motor operators for those doors/shutters to accommodate frequent use by hospital staff, and because the size and weight of the doors makes manual operation difficult. The addition of motors necessitated door type changes, heavier structural support, the addition of fire life safety devices, and associated electrical systems. There are 20 coiling doors and shutters located at public reception, registration, and waiting areas in the Outpatient Department building; 8 exterior doors in the Central Plant; 18 doors located in corridors and waiting areas in the Diagnostic and Treatment building; and 9 doors located near the loading dock and at reception areas in the Inpatient Tower.

When the contractor submitted the first coiling door and shutter submittal for the Outpatient Department building in September 2003, the architect, Hellmuth, Obata, Kassabaum/Lee, Burkhart, Liu (HOK/LBL), realized that the motor operators had been mistakenly eliminated from the plans and specifications. HOK/LBL initially recommended the addition of motors to 48 of the 55 doors under the assumption that the remaining 7 doors were small enough to be manually operated by hospital staff. However, Public Works decided to also motorize these doors because it was found that following fire alarm activation hospital staff would have to wait for specially trained fire-life-safety technicians to be dispatched to the hospital to re-set the doors to the open position, causing an unacceptable delay to patient care delivery.

Public Works issued two proceed orders totaling \$149,999 for the change to avoid impacts to the construction schedule. Cost negotiation of this change with MCH has not been finalized. Our estimate identifies the total cost will not exceed \$1,160,000. However, if it is found, after negotiations with MCH, that the final value of the change order exceeds the cost estimate, we will return to your Board for approval.

**REASON AND SCOPE - RECOMMENDATION 4**

Unforeseen condition	<input type="checkbox"/>	Regulatory agency requirement	<input type="checkbox"/>
Drawing Coordination	<input type="checkbox"/>	Previously approved scope change	<input type="checkbox"/>
Errors and Omissions	<input checked="" type="checkbox"/>		

Approval of the recommended action will provide clarification and direction to the contractor to weld the Z-clip connections at 24-inch intervals without an additional shot-pin connection. This connection issue occurs at locations in the Inpatient Tower where interior walls are directly beneath structural beams. The contract documents identify two types of connection details for the Z-clips. One connection detail identified that Z-clips were to be attached at 24-inch intervals and welded to the structural steel beam. Another less expensive detail that was bid by the contractor showed attachment at 12-inch intervals and shot-pinned to the beam with no welding. However, during installation, the structural engineer determined that the less expensive shot-pin attachment did not meet code requirements and required the contractor to weld the Z-clips to the steel beams at 24-inch intervals.

The total cost of the work has been negotiated between Public Works and the contractor for a not-to-exceed cost of \$261,311 with no delay to the project completion date. Public Works and the Chief Administrative Office have reviewed this matter as well as the potential cost impact with the Project Advisory Committee. This work is considered to be within the scope of the project.

**REASON AND SCOPE - RECOMMENDATION 5**

Unforeseen condition	<input type="checkbox"/>	Regulatory agency requirement	<input type="checkbox"/>
Drawing Coordination	<input type="checkbox"/>	Previously approved scope change	<input type="checkbox"/>
Errors and Omissions	<input checked="" type="checkbox"/>		

Approving the recommended action will allow for installation of 252 additional smoke detectors in the Outpatient Department building as required by code that were not identified in the fire alarm contract drawings. The Outpatient Department building life safety drawings included notes indicating that smoke detectors were to be installed in hallways, corridors, and waiting areas. However, neither the life safety or fire alarm drawings identified specific locations, quantities, or electrical to provide a complete and operational system in accordance with code. This omission was discovered by

HOK/LBL during the initial review of the fire alarm shop drawing submittal. Several meetings were held, and Public Works determined it unreasonable to expect the contractor to interpret the specific smoke detector scope of work requirements from the limited notes shown on the life safety contract drawings. Public Works and the Chief Administrative Office have reviewed this matter as well as the potential cost impact with the Project Advisory Committee. This work is considered to be within the scope of the project.

Public Works issued a proceed order in the amount of \$120,000 for a portion of this work to avoid delay impact, the value of which is included in the recommended \$360,000. Cost negotiation of this change with MCH has not been finalized. We estimate that the total cost will not exceed \$360,000 with no delay to the project completion date. However, if the final value of the change order exceeds the cost estimate, we will return to your Board for approval.

**REASON AND SCOPE - RECOMMENDATION 6**

Unforeseen condition	<input type="checkbox"/>	Regulatory agency requirement	<input type="checkbox"/>
Drawing Coordination	<input type="checkbox"/>	Previously approved scope change	<input type="checkbox"/>
Errors and Omissions	<input checked="" type="checkbox"/>		

The Central Plant was designed so that the building could withstand higher seismic forces than those required by code. However, the construction documents did not consistently identify the increased bracing requirements for mechanical, electrical, plumbing, and fire sprinkler utilities housed within the Central Plant. Approval of this action will provide clarification and direction to the contractor to install stronger bracing for these utilities.

The California Building Code requires minimum standards for the seismic bracing of building utilities. During design, Health Services and Public Works determined that the building and certain utilities housed within the Central Plant should be braced to withstand higher seismic forces than the code minimum. This determination was to help ensure there would be no loss of electrical power, hot and cold water, and chilled water to the base-isolated Diagnostic and Treatment building in the event of a maximum credible earthquake.

The construction documents showed bracing details to accommodate the intended program requirements for only plumbing pipes 16 inches in diameter or larger. All other mechanical, electrical, plumbing, and fire sprinkler drawings remained at the code

minimum seismic bracing requirements. During preparation of coordination drawings for the mechanical, electrical, plumbing, and fire sprinkler systems, the contractor questioned the inconsistencies in seismic bracing requirements. Consequently, the architect determined that various other utilities should likewise be braced to the more stringent program requirement to ensure continuous operation and delivery of patient care services in the Diagnostic and Treatment building during and after a large earthquake.

Public Works and the Chief Administrative Office have reviewed this change and potential cost impact with the Project Advisory Committee. This work is considered to be within the scope of the project.

Public Works issued proceed orders to the contractor totaling \$150,000 to complete the contractor coordination drawings using the increased seismic bracing requirements. These costs are included in the estimated \$1,350,000 change order request. Our estimate identifies the total cost will not exceed \$1,350,000 with no delay to the project completion date. However, if the final value of the change order exceeds the cost estimate, we will return to your Board for approval.

#### **CONTINGENCY BUDGET SUMMARY**

CHANGE SUMMARY				
Contingency Budget	Executed Change Orders	Impact of These Actions	Remaining Contingency Budget	Percentage Remaining
\$54,195,027	\$16,965,174	\$4,210,532	\$33,019,321	60.93%

#### Notes:

1. The executed change order amount shown above reflects executed changes as of July 26, 2005.
2. The aggregate value of executed construction change orders does not include the value of potential changes currently under review. The merit and scope of each issue must first be evaluated and then the value negotiated. The combined value of these issues, as quoted by the contractor, could be as high as \$20,600,000. However, Public Works historically settles quotes from the contractor at less than 60 percent of the quoted value. Therefore, the anticipated value of the open issues is approximately

\$12,400,000. When added to the \$16,965,174 of change orders executed through July 26, 2005, there is an estimated total potential change exposure of \$29,400,000 against the \$54,195,027 Board-approved contingency.

The architect is contractually responsible for construction costs resulting from errors and omissions that are in aggregate 3 percent of the project construction value. Public Works is tracking these costs and will assess damages against the architect if these costs exceed the 3 percent threshold.

### **CONCLUSION**

Please return one adopted copy of this letter to the Chief Administrative Office (Capital Projects Division) and Public Works.

Respectfully submitted,

DONALD L. WOLFE  
Director of Public Works

DAVID E. JANSSEN  
Chief Administrative Officer

BB:pdw

Combined TOW\_Coil\_Zclip\_waterproof\_Smoke Det\_Seismic.doc

cc: County Counsel  
Department of Health Services (Fred Leaf, Azar Kattan)  
Project Advisory Committee (A. Redmond Doms, Jerry Epstein, Nick Patsaouras)